MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

16. *Observations on the Prevention and Treatment of Apoplexy and Hemiplegia.*—Dr. Marshall Hall read to the Medical Society of London in April last an interesting paper on this subject.

"The question," he remarked, "of the causes, nature, prevention, and treatment of apoplexy and hemiplegia was a very complicated one. He thought the attention of physicians, in reference to the prevention and treatment of apoplectic and hemiplegic attacks, had been far too much confined to the question of plethora as the disease, and of depletion as the remedy. It was to him certain that such attacks might and did occur quite irrespective of general plethora; nay, that they occurred in connection with the opposite condition of the system, that of inanition and anæmia. Nor was a state of anæmia the only other condition besides plethora which led to the apoplectic or hemiplegic attack. Morbid conditions of the stomach and morbid conditions of the intestines were other sources of these seizures. But he had also observed the occurrence of apoplectic affections under other circumstances; other indubitably predisposing causes of the apoplectic seizure were dyspepsia, cachexia, and gout. Nor was even this view of the subject sufficiently extended; the liver and the kidney must do their office. These sources of the apoplectic or hemiplegic seizure consisted in conditions of the general circulatory system, and of the blood itself. There were still others of a different kind.

"The first of these was disease of the heart; and this consisted, first, in hypertrophy, with augmented impulse given to the arterial blood; or, second, in dilatation of the heart and disease of its valves, impeding the reflux of the blood along the veins.

"The second was disease of the capillary vessels, of the minute arteries, or of the minute veins of the brain and its membranes.

"Lastly, there were causes of apoplexy in the muscular efforts, by which the action of the heart itself was augmented, as in violent running, the ascent of a mountain, &c., and in other muscular efforts, by which the return of venous blood was impeded, as the efforts of vomiting, or for the expulsion of the fæces; and still more, of parturition.

"This view of the causes of apoplexy would sufficiently denote the complexity of the problem of the prevention and treatment of the apoplectic and hemiplegic attack; for that prevention depended on restoring the system to a state of what may be termed equilibrium, in regard to plethora and inanition; to the removal of irritating or morbid matters from the primæ viæ; to the correction of the morbid diathesis in dyspepsia, gout, and cachexia. The prescription must include remedies and regimen to meet all these circumstances, and, as he had stated, the problem was by no means either an easy or a simple one. Yet another element in the problem was that which related to the local or topical remedies. On each of these sources of the apoplectic and hemiplegic attack, he proposed to make a few observations. These observations would be principally addressed to the medical practitioner; but as far as they might relate to regimen, they might, he thought, be profitably considered by the patient.

"(1). *Of plethora, or fulness.*—This cause of the apoplectic or hemiplegic seizure was that which had received most attention, or rather it was that *towards* which medical opinion was most biassed, not to say prejudiced. It was unnecessary for him to describe the symptoms of this condition so well known. The most satisfactory mode of treatment was to open a vein and allow the blood to flow from an ample orifice, the patient being placed in the perfectly erect position, until incipient syncope was induced; the quantity of blood which thus flowed was the diagnosis and measure of the disease in every respect. If the patient were young and robust, if the plethora were decided, and especially if there were real congestion and no laceration of the brain, a large and proportionate quantity of blood would flow before the slightest degree of syncope was manifested. No other measure afforded at once such security to the patient, and such information to the physician. It was impossible for him to speak in too high terms of the advantage of this measure in both these respects. In reference to blood-letting, there was this important question, Was the case one of *congestion* or *pressure*, or was there actual hemorrhage with *laceration* of the substance of the brain? In the former case, much blood would flow before incipient syncope occurred, and much might be—must be taken; but in the latter the injury had inflicted a shock upon the system, and little blood flowed before syncope appeared; and even the loss of that little was difficultly borne. To take more would be death! It might be said that we ought to distinguish the two cases *à priori*. He replied in the words of Celsus, 'Id votum est.' Turgidity and flushing denoted congestion, and pallor and collapse might denote laceration. But many cases occurred in which nothing so marked was observed; and in these, in the absence of an earlier and more perfect diagnosis, he knew by experience, that the plan of instituting blood-letting proposed, afforded most important and salutary information, leading us on to take more blood in the case in which greater depletion was required, and checking our depletion in those in which it would not be either well borne or remedial. But having made and repeated this statement on other occasions, and the profession being, he believed, well acquainted with it, he proceeded at once to another topic.

"(2.) *Of inanition.*—It was constantly his lot to see patients who were in jeopardy not from fulness but from inanition, and who had long been kept in a state of anæmia by blood-letting, general or topical, when an opposite treatment was required to restore the equilibrium of the system, and to remove the vertigo and other symptoms threatening an attack of apoplexy. A state of pallor, a disposition to faintishness, palpitation and nervous timidity, the occurrence of the symptoms when the stomach was empty, when the bowels had been relieved, and on suddenly looking upwards, or resuming the upright position on rising from bed, or after stooping, or the recumbent position. Such were the diagnostic *signs* of a state of inanition from a state of plethora. The *history* of the case also afforded a diagnosis; for, although depletion might have appeared to afford a momentary *relief* of the symptoms, it had ensued in their *aggravation* in general. An opposite mode of treatment, very cautiously and prudently adopted and pursued, would confirm the diagnosis, by affording a more permanent, though possibly a less immediate and marked relief. It was to the important distinction between the immediate and permanent relief, indeed, that he would draw the attention of the profession. In the case of symptoms portending apoplexy or hemiplegia, although these might arise from inanition, yet they were invariably *relieved* by depletion, although they afterwards returned with augmented force. This effect was very puzzling to the inexperienced practitioner. It was explained by the fact that the symptoms ceased under the influence of a condition allied to syncope, but returned with the reaction. This subject must be carefully studied, in order that the nature and treatment of the case might be understood. He had next particularly to notice that the state of anæmia was not one of safety. In such circumstances, apoplexy and hemiplegia, with the actual effusion of blood into the cerebrum, had occurred. Such a case was related by the late Dr. Denman. It occurred in the midst of exhaustion and anæmia from protracted uterine hemorrhage: a clot of blood was found in the cerebrum. A similar case was detailed by Mr. Travers. This latter occurred under the actual use of the lancet, and during the flow of blood from the arm. A third case occurred to Mr. Hammond, of Brixton, after parturition. The patient was attacked with hemiplegia; she gradually recovered. We might therefore incautiously bleed our patients into apoplexy and hemiplegia! This statement should lead us to be very wary in the use of this remedy in doubtful or protracted cases. Even in cases of injury of the brain, as in concussion, the same question presented itself. This point was admirably illustrated by the following remark of Sir Benjamin Brodie:—' Where bleeding has been carried to a great extent, symptoms frequently occur which in reality arise from the loss of blood, but which a superficial observer will be led to attribute to the injury itself, and concerning which, indeed, it is sometimes difficult even for the most experienced surgeon to pronounce, in the first instance, to which of these two causes they are to be referred. Repeated copious blood-letting is of itself adequate to produce a hardness of the pulse, which we shall in vain endeavour to subdue by persevering in the same system of treatment. In many individuals it will produce headache and confusion of mind, not very different from what the injury itself had previously occasioned.' The pallor of the countenance, the effects of position, the effects of fasting, or of an active purgative, the history of the case, must be carefully considered in forming our diagnosis. The treatment would then consist in carefully restoring the system to its state of equilibrium.

"(3.) *Of Dyspepsia and Cachexia.*—There could be little doubt that in dyspepsia the blood itself became contaminated, and, as it were, *cachectic.* On this principle we accounted for the appearance of furunculus and paronychia; for the morbid condition of the tongue and interior of the mouth, the general cutaneous surface, the secretions, &c. He had so often observed symptoms threatening the apoplectic or hemiplegic attack, in conjunction with symptoms of dyspepsia and cachexia, that he had no doubt of the vast importance of a strict attention to this subject. That very day, (Oct. 1, 1841,) he had been consulted by a medical gentleman from Birmingham under these circumstances. One form of this affection was the following:—vertigo occurred with faintishness, sickishness, and a cold clammy perspiration; sometimes there was actual sickness, sometimes much flatus. In these cases the feet and other extreme parts were apt to be cold. The secretion of the liver was frequently defective, and the urine was apt to deposit the lithic acid salts. Nothing could be so injurious as blood-letting. In no case was the loss of blood repaired with such difficulty. The application of a few leeches frequently left a state of debility and pallor which were felt and seen for weeks. The treatment consisted in the correction of the secretions, and in the infusion of tone and general health into the system. The compound decoction of aloes, the infusion of rhubarb, of gentian, of cinchona, singly, or better, mixed together; sarsaparilla, the vinum ferri, the bicarbonate of potass; stomachics, tonics, and antacids, in a word, were the principal internal remedies. But with these, a mild, nutritious diet, a system of gentle exercises, early hours, the tepid salt-water shower-bath, and a strict attention to the condition of the feet and general surface, by means of the flesh-brush, flannel, and a frequent change of shoes and stockings, should be conjoined. Those engaged in the harassing affairs of a London life should sleep in the country, and cherish the utmost quiet of mind.

"(4.) *Of gout.*—But he had frequently traced a connection between gout and its frequent attendant, the lithic acid diathesis, and the apoplectic and hemiplegic seizure. It was not merely plethora, or the opposite state of inanition, which led to the apoplectic attack. The morbid state of the blood in dyspepsia and cachexia also disposes, as he had already said, to this affection. The same remark applied to the condition of the system and of the blood, especially in gout; and, as he should have to observe immediately, the same disposition obtained in several morbid conditions of the liver and kidney. A nobleman, now no more, suffered in succession from gout and the herpes zoster, and the urine deposited the lithites copiously. He was relieved by the appropriate remedies, and became affected with an apoplectic (or epileptic) attack. A similar attack (without hemiplegia) occurred several months afterwards, and a third attack proved fatal. This gentleman was pallid, the prolabium being white. A steady perseverance in such remedies as the decoctum aloes compositum, the bicarbonate of potass, and the vinum ferri, had in other cases effectually averted the threatened evil. But he must make another remark. The vinum colchici should be given in very minute doses, as five drops thrice a-day, also steadily and perseveringly, to overcome the specific gouty diathesis. The lithic acid diathesis was not the only urinary disorder which led to apoplexy and hemiplegia. This attack, it was well known, occurs in the case of diabetes and in that of albuminous urine. Although he had designated the attack apoplectic and hemiplegic, it was sometimes more allied to epilepsy than apoplexy. The gentleman to whose case he had briefly adverted, was affected with minute ecchymosed spots on the forehead, which he had only observed under three circumstances, viz., after severe vomiting, the effects of parturition, and the epileptic attack; when he saw him, soon after the second seizure, the insensibility had passed away, and there was no hemiphlegia.

"(5.) *Of disease of the heart.*—It had long been supposed that disease of the heart is a cause of the apoplectic seizure, and hypertrophy of that organ had been fixed upon as the most influential in this respect. On this question the pathologists of France were much divided. Of the two latest writers on the subject, M. Andral was of opinion that hypertrophy was really a frequent cause of apoplexy; whilst M. Louis was of the opposite opinion. There could be no doubt that, *cæteris paribus*, hypertrophy of the heart would co-operate in inducing the apoplectic attack; but he thought that a much more energetic cause of apoplexy, and of congestion and hemorrhage in general, was that form of disease which impeded the return of the venous blood from the brain, viz., dilatation and valvular disease. The worst form of hypertrophy might be unattended by symptoms or appearances of congestion; but no severe case of dilatation or of valvular disease ever existed, without lividity of the countenance, dozing, and other appearances and symptoms of apoplectic tendency. Altogether, however, we wanted a series of cases, carefully taken and analyzed, and statistically given, to *establish* the truth of the real influence of disease of the heart in inducing the really apoplectic seizure.

"(6.) *Diseases of the capillary and minute vessels.*—The influence of this cause of apoplexy was placed beyond question by post-mortem examination. Sometimes the morbid appearance was a dilated condition of the capillaries; sometimes an ossified condition of the minute arteries (?); sometimes a minute aneurism. Another important topic was that of "ramolissement," or softening of the brain, as the *cause*, and as the *effect* of the apoplectic or hemiplegic seizure. In resuming the subject he might remark, that it was not plethora alone which predisposed to the apoplectic and hemiplegic attack; the very opposite condition of the system, or anæmia, whether it arose from the loss of blood by blood-letting, or hemorrhage, or from defective sanguification, was not free from this danger; dyspepsia and cachexia, as they induced external disease, as seen in furunculus, paronychia, &c., might also induce a paralytic affection, a morbid condition of the blood taking the place of plethora or anæmia.

"(7). *Of muscular efforts.*—He might make the same remark in regard to muscular efforts, which he had done in regard to disease of the heart—those efforts which opposed resistance to the reflux of the venous blood, were much more efficient causes of the apoplectic seizure than those efforts which augmented the momentum of the arterial blood. Thus, we rarely heard of the occurrence of apoplexy during the violence of the race, during the ascent of mountains, &c., but such an occurrence at the water closet was by no means uncommon; and we all knew how apt the parturient efforts were to induce congestion of the brain, and the consequent apoplectic seizure. It would be most interesting to correct our ideas on these subjects by a cautious appeal to facts.

"Dr. Hall, in reply to a question, detailed a case in which the symptoms threatened apoplexy. The patient had been bled much and purged, was pallid, and there was a *bruit*, as from loss of blood, perceptible. The patient was worse before breakfast than after dinner, and could not look up. He recovered under the employment of mild chalybeates. This was an extreme case; there were many of an intermediate character. Dr. Hall also expressed his opinion that the skull always contained the same quantity, but the blood might be occasionally more serous, and give rise to a pallid condition of the brain; but in this state, rupture and effusion might take place."—*Lond. and Edin. Month. Journ.*, Aug. 1842.

---

17. *Quantity of Blood within the Cranium.*—Mr. Jolly maintains, from considerable experience, that no fact can be more clearly established, than that the

brain is an elastic, and, therefore, compressible organ, and, of course might contain more blood at one time than at another.—*Ibid.*

18. *Blood in the Brains of Animals bled to death.*—Mr. Crisp states that he last year made a series of experiments with the view of determining the condition of the brain of animals bled to death. The result was quite different from that stated by Dr. Kelly, of his experiments performed for a similar purpose. Dr. Kelly found the brain always full of blood, while he, on the contrary, had found it to be bloodless; nor could he discover any corresponding quantity of serum to make up the deficiency. Mr. Crisp's experiments consisted in killing dogs and rabbits, by dividing the carotid artery. The brains of the same kind of animals killed by poison, and other means, presented a very different appearance.—*Ibid.*

19. *Belladonna in Epilepsy.*—Dr. Debreyne, lecturer on practical medicine at Le Grande Trappe, Orne, has published a *resumé* of his experience of the treatment of epilepsy for the last twenty-five years, in the cases that have occurred under his charge, in which he gives the decided preference to belladonna as a therapeutic agent. He says that, having tried in vain valerian, orange leaves, white oxyde of zinc, the meadow narcissus, the ammoniaco-sulphate of copper, the nitrate of silver, Méglin's pills, the cyanuret of potassium, the croton-tiglium, not used as a drastic purgative, but as an anti-epileptic, he was induced to have recourse to belladonna, by the perusal of a case published by Stoll in his *Ratio Medendi*, pars iii. p. 217. Of the other medicines mentioned above, he derived the greatest advantage from the oxyde of zinc, the nitrate of silver, and the valerian.

Dr. Debreyne has used the belladonna extract in about two hundred cases of epilepsy during the last twenty-five years, and he says there had been scarcely one in which its use was not attended with advantageous results. Generally speaking, the fits have been diminished in intensity, and have occurred less frequently, or have been altogether suspended for weeks, months or even years. Cases have occurred where the fits used to come on every month or week, or even several times in the week, but where, under the influence of the belladonna, they have been suspended for six months, and even for one, two, or more years. Some patients have asserted that they had not had a relapse for seven, eight, or nine years. In all cases where the attack comes on with the premonitary aura, Dr. Debreyne furnishes his patients with a small bottle of liquid ammonia, to arrest the coming attack. The more frequent the fits are, the more readily is the complaint influenced by the belladonna; but when they occur only once every four, five or six months, it is much more difficult to modify them—that is, to diminish them in intensity, or to suspend them altogether. In such cases the remedy should be administered some time previous to the presumed epoch of the nearest attack. At the same time it must be observed that belladonna is by no means a specific in epilepsy; in fact, cases would occasionally occur in which the severity of the fit would be for a time much diminished, or the attack altogether suspended, and yet, after the lapse of a certain period, the remedy would become altogether powerless. In such a case no other medicine was found of service. The cases of epilepsy spoken of throughout by Dr. Debreyne, are of course cases of the disease, when it occurs independent of lesion of structure; but, he adds, that in symptomatic epilepsy if, after the removal of the cause, the fits should still recur by a sort of habit of the nervous system, the belladonna might be had recourse to, and, should it fail, the quinia alone, or combined with valerian, might be ordered. The mode of administration of the belladonna is as follows:—Four scruples of the watery extract of belladonna are mixed with two of powdered gum arabic, and a sufficient quantity of any inert powder to make 120 pills, one of which is given the first day, two the second, the dose being gradually increased to six in the twenty-four hours, although it may be raised to eight or nine pills taken daily, if disordered vision, or other symptoms of the injurious effects of belladonna, do not show themselves. In that case the dose must be diminished, or omitted altogether for several days.—*Prov. Med. Journ.*, July 2, 1842, from *Bull. de Thérapeutique.*

20. *Nature and Treatment of Scrofula.*—After enumerating the different forms of scrofulous cachexia, Dr. Roesch arrives at the conclusion that scrofulous affections are produced by an excess of acid matters in the fluids of the body. Agreeing with the ancient physicians in his theory of the disease, he recommends their plan of treatment, viz. absorbents, alkalies, and fat or oily matters. He says he has observed that, in those countries where the children get a quantity of lard and other fat matters with their food, that scrofula is extremely rare. Cod-liver oil, is therefore, according to him, one of the most suitable remedies to administer in this disease, seeing it possesses the rare properties of being at once a stimulant, a roborant, an antacid, and nutrient. He considers that the iodine in it will have a very secondary effect, the other properties of the oil being the most valuable.—*Ed. Med. and Surg. Journ.*, July 1842, from *Haeser's Archiv.*, Oct. 1841.

21. *State of the Blood in Hydrophobia.*—The last number of the Austrian *Yahrbücher* contains an interesting case of hydrophobia, with an account of some experiments performed by Professor Berres on the patient's blood.

The blood was dark red in colour, and of an oily feel; with the exception of the portion contained in the heart, it furnished very little fibrin and did not coagulate. When examined under the microscope, the globules appeared as perfectly round corpuscles of a dull white colour, without any nucleus, and with a few dentated red rays along the edges.

The bicarbonate of potass developed the red coloured rays on the corpuscles; the same effect was produced more evidently by a concentrated solution of sulphate of copper, and the nuclei now appeared.

On washing the corpuscles with water, they became of a dull white colour, and seemed to pass gradually into a gelatinous, granular mass of molecules.

Concentrated acetic acid turned the corpuscles into molecules. At first, each globule changed into a cluster of small granules, which soon separated, thus showing the difference between them and the globules of healthy blood.

Under a solution of chlorine the globules remained transparent, but soon changed into a granular mass. When concentrated muriatic acid was mixed with a few drops of the blood, a considerable quantity of gas was disengaged, and the corpuscles were converted as before into molecules, with a few opaque, contracted globules mixed amongst them.

Treated with concentrated nitric acid the globules became small, round, and opaque; some few were oblong; some pointed at both ends.

Sulphuric æther, iodine, and corrosive sublimate were also employed with analogous effects. The action of water, chlorine, acetic and muriatic acids, was altogether different from that produced on healthy blood; the three first substances rapidly changing the corpuscles into molecules, and the latter disengaging a remarkable quantity of gas. The peculiarities then observed in the blood in this case may be stated to be—dull white globules, without nuclei; no appearance of the crenated margin; a very quick transition of the corpuscles into molecules, and a tendency to lose their individual character.—*Prov. Med. Journ.*, July 2, 1842.

22. *Disease of the Kidney.*—Dr. Barlow has narrated a series of interesting cases illustrative of the following points:—First, that there is a certain symptom connected with irritation of the kidney, and which, although not confined to it alone, is not necessarily connected with disease of those structures whose affections are most likely to be confounded with those of the kidneys, so that when this symptom is absent, we may eliminate, and thereby disembarrass ourselves of the consideration of all such affections of the kidneys as would necessarily be attended by irritation of that organ; and when this symptom is present, we are furnished with a reason for assigning the seat of the disease to the

kidney, in preference to several adjacent structures. The symptom is sickness, or irritability of stomach.

Secondly, and further, there is a certain symptom, or rather, set of symptoms, dependent on the non-depuration of the blood by the kidney, whether this non-depuration be the result of mechanical obstruction to the flow of the urine, of a diminution in its quantity, or of a depraved condition of that secretion, in which its most important ingredients are wanting—viz., cerebral disorder of a peculiar character.

There are, however, several affections of the kidney which do not necessarily give rise to irritation of that organ, and in which the sickness *may* not be present to aid our diagnosis; of these, the principal are the granular degeneration, suppuration, and perhaps some forms of adventitious or malignant deposit.

In the first of these, the disease, depending in the first place probably upon congestion, and afterwards upon a chronic change in the structure of the organ, irritation is not a necessary concomitant, although the disease may, and no doubt frequently does, result from irritation, giving rise to chronic inflammation; accordingly, we find that sickness is always present, although it is sometimes a most troublesome symptom. In suppuration we should generally have irritation, giving rise to sickness, in the first instance, and probably, at a later period, obstructed function, with its concomitant changes in the urine, and cerebral disorder, with probably, at some time, the presence of pus in the urine.

With regard to malignant disease, it is very probable that this deposit taking place, as has been remarked by Dr. Bright, in the cellular membrane connecting the firm parts of various structures, the parts of the organ in which this deposit takes place may be, as it were, pushed aside, without suffering any mechanical violence or functional disturbance; at the same time, it is also probable that, in the progress of distension to which this organ is subjected, some slight laceration, or irregular pressure, giving rise to irritation, will sooner or later occur, and accordingly some sudden invasion of sickness almost uniformly happens before such deposit in the kidney has produced a tumour of any considerable size. We should also in this case, probably, have some degree of hæmaturia, especially if the disease be of a fungoid character, the most common form of malignant deposit in the kidney.

Irritability of the stomach is not to be regarded as pathognomonic of disease of the kidney; but in cases where doubts arise as to whether any disease is to be referred to the kidney, or some neighbouring organ, the absence or presence of sickness will go far to decide the question; and further, in cases not unfrequently met with, where the prominent symptom is distressing and obstinate sickness without any assignable cause, especial attention should be directed to the kidneys, and every means used to determine the state of those organs. The same observations will apply very nearly to the second class of symptoms—namely, the cerebral disorder; for as yet we want sufficient evidence to prove that similar derangement of the function of the brain may not be produced by other causes. The cases narrated are nine in number.—*Ibid.*

—

23. *Simple and Double Pneumo-Thorax.*—Dr. Puchelt, Jr., relates in the *Medicinische Annalen*, a case of double pneumo-thorax, and offers the following conclusions.

1*st*, The duration of a case of double pneumo-thorax is much shorter than one of simple. In the first, it may last for a few days; in the second, for some months, or even for a year.

2*d*, The commencement of pneumo-thorax is characterized, in general, by a sudden pain in the affected side, and by great dyspnœa. However, both of these symptoms may be wanting.

3*d*, The pain in the side, which takes place during the course of the disease, may become very violent. It is a pleuritic pain.

4*th*, In the double, the general state of the patient is less marked by collapse, than in the simple pneumo-thorax. It is more distinguished by a sense of suffocation.

5th, Dyspnœa is inseparable from the double, while in the chronic pneumo-thorax it is hardly distinguishable.

6th, The affected side being dilated, the phthisical appearance is effaced, which makes the diagnosis difficult in the double pneumo-thorax.

7th, The organs adjacent to the chest are displaced, especially the heart and liver.

8th, Percussion over the diseased side is very clear and tympanitic; it may, however, be dull, and even normal in some places.

9th, It is almost impossible to indicate the level of the liquid by percussion.

10th, The causes, according to Skoda, which give rise to a sound sometimes tympanitic, and sometimes clear, depend on the greater or less distension of the walls of the chest.

11th, It is not only the air and fluid contained in the chest, which modify percussion, but likewise the adhesions existing between the pleura of the lungs and parietes, and of these again, with masses of false membrane.

12th, Metallic tinkling is not pathognomonic of the disease; it is found also in large tuberculous cavities.

13th, Metallic tinkling is much more distinct in pneumo-thorax than in tuberculous cavities.

14th, In pneumo-thorax, it is found most frequently in the middle, and towards the posterior part of the chest, and over a great extent of surface; while again in a cavity, it is towards the upper and anterior part of the lung, and over a much more limited space.

15th, There are two kinds of metallic tinkling; the one, "*bullaire*," resembles a clear sound produced by the head of a pin being struck lightly against a thin plate of metal; the other is the metallic echo of the voice, cough, or *râle*.

16th, The "*bullaire*" metallic tinkling is produced by the passage of air across the pleural effusion, (if the pulmonary fistula opens below the level of the liquid,) or across the liquid found in a perforated tuberculous cavity, (if the opening in the lung is below the level of the pleural effusion,) and ought to be attributed to the collision of the fluids momentarily separated by the passage of the air.

17th, The development of this phenomenon can only take place when a permeable bronchial tube opens into the cavity.

18th, The metallic echo is only the simple resonance of the voice or cough in the pleural cavity filled with air and very little fluid.

19th, When the pulmonary fistula opens above the level of the effusion, and the cavity with which it communicates is small and dry, it does not produce the "*bullaire*" metallic tinkling; and again, if the bronchial fistula is far from the periphery of the lung, the metallic echo is not produced.

20th, The chemical analysis of the air in the pleura communicating with the bronchi, contains very little or no oxygen, a little carbonic acid, and a great deal of nitrogen.—*Lond. and Edin. Month. Journ.*, July, from *Gaz. Med. de Paris*, Feb. 12, 1842.

—

24. *Influence of light on the development of the Small-pox pustule.*—In a discussion at the French Academy of Sciences July 4th, M. SERRES stated that he had made numerous experiments by covering the small-pox pustules with small glass cups, and observed that the pustules were developed, modified in their progress, or completely arrested, according to the degree of transparency of the glass.

—

25. *Urea secreted in large quantity by the peritoneum in a case of Ascites.*—Prof. KANE of Dublin has detected urea in large quantity in the fluid drawn by tapping from the abdomen of a woman affected with ascites combined with symptoms of Bright's disease of the kidneys.—*Dublin Journal Med. Sci.* March, 1842.

—

26. *Nature and Treatment of stridulous Convulsion in Infants.* By MARSHALL HALL, M. D.—The disposition to this disease seems to consist in a peculiar sus-

ceptibily of the excito-motor property of the nervous system. The immediate attacks are the result of the action of sources of irritation or excitement of this property. This susceptibility should, if possible be diminished, and the causes of excitement should be most carefully avoided. These are the *two principles* which must, I believe, guide us in our treatment.

I. The most obvious sources of irritation and excitement are—

1. *Dentition.*
2. *Indigestible food.*
3. *Morbid alvine matters.*
4. *External agents.*
5. *Mental emotions.*

On each of these subjects I proceed to make a few remarks.

1. *Of Dentition.*—I have long regarded the process of dentition as not very dissimilar from a state of *sub*-inflammation. I have therefore prescribed the gum-lancet, not only in cases of actual dentition, but in cases in which I did not immediately expect the eruption of teeth through the gums, and even in cases in which *all* the teeth had already appeared. From the same motive I have prescribed scarification of the gums within and without the highest or lowest border of the gums, or the lines along which the teeth make their appearance.

I have prescribed the use of this remedy, in a word, to correct a state of the blood-vessels and nerves, which, though physiological, borders on a pathological character. I have prescribed it to be used daily. I have been satisfied with nothing short of the subjugation of the excessive action and fulness of the vessels, and of the disappearance of morbid actions, chiefly of a nervous character, in distant parts.

I have thought it right to continue the remedy, even when these effects have been produced, knowing, by painful experience, how apt they are to recur. I have considered that an infant had better have its gum lanced a thousand times unnecessarily even, than be subjected to *one* convulsive attack. I have compared the *operation* on the *gum* with the *morbid effect* of a convulsion on the *brain.*

My prescription has been met by opposition, but by no argument; by forebodings of terrible ulceration, and even mortification of the gums, but by no such occurrence.

In one word, I believe we have still to learn the measure and extent of the advantage to be derived from the full, free, and daily scarification of the gums during the process of dentition.

Interesting questions to determine would be—first, whether the temperature is, as is alleged, augmented during dentition; and, secondly, whether this elevated temperature be reduced by the use of the scarificator. It is well known that the new horn of the deer is extremely hot during its rapid growth. It is well known that frequent scarification of the conjunctiva reduces the actual inflammation of that membrane.

2. *Of Indigestible Food.*—The repetition of the attack of crowing convulsion has so often, within my own experience, been the result of improper and indigestible food, that I invariably fix upon some one article or kind of diet, of the most unquestionable character, to the exclusion of all others. In the case upon which these remarks are based, I desired that a young and healthy nurse might be procured, and that no other kind of diet might be allowed. We were fortunately successful both in our choice of a nurse and in the result of our experiment, and to this day the little patient has taken no food except the nurse's milk.

In other instances, when the child was too old for a nurse, I have recommended asses'-milk, or a certain proportion of cow's-milk and water, thickened with rusk or arrow-root, and taken through a "bottle," as the *sole* diet.

In the case of the threatening of an attack, I have directed the fauces to be tickled by a feather, and the stomach to be thoroughly evacuated by vomiting.

3. *Of the state of the Bowels.*—The bowels should be well moved daily. But in accomplishing this, we must avoid all *irritating* measures, which may them-

selves induce the attack, and *exhaustion*, which adds to the susceptibility to attacks.

If the secretions be wrong, a grain of calomel or blue pill should be given frequently. Large doses of calomel are, I am persuaded, injurious. They are the source of much irritation first, and of much exhaustion afterwards. The mildest effectual aperients are next required. The infusion of rhubarb, with the tartrate of potass and manna, is one of these. To such a draught a few drops of the tincture of hyoscyamus, of the aromatic spirits of ammonia, and a little of the syrup of ginger, may be added. But a *most* important remedy is the enema of warm water or barley-water. To be administered in sufficient abundance, this must be given *very* slowly. It is then most effectual, *washing* out the intestine, and removing what even drastic purgatives would leave behind.

It frequently happens that, in the crowing disease, there is a spasm of the gall-ducts, and the alvine evacuation is as pale as white clay. Nothing removes this state of things so effectually as the repeated use of an ample lavement. It has accomplished more than the blue pill, the gray powder, or calomel itself. I shall never forget the surprise of a friend of mine, who had brought his child to me, saying, "all my remedies have failed in inducing the due flow of bile." I said, "omit all medicines, and give an ample lavement night and morning." In three days the desired event was accomplished. I have already suggested the propriety of avoiding the irritation of purgative medicine by adding the hyoscyamus.

4. *External Agents.*—The principal of the external agents which influence this disease, both injuriously and beneficially, is the external atmosphere. The baneful influence of the *northeast* wind, and the curative influence of *change* of air, and especially of the *sea-breezes*, are not less marked in this affection than in hooping-cough; facts which, with many others, denote an intimate relation between these two diseases.

When the little patient has been long free from attacks, a sudden change of the wind to the northeast frequently induces a return of them; and when they have been long obstinately repeated, and have become, as it were, chronic, a change of air has induced as suddenly a suspension of them.

An interesting remark is made by Sir Henry Marsh (Dublin Hospital Reports, vol. v., p. 610). Speaking of a little patient affected with this disease, he observes: "About this period a slighter recurrence of these symptoms led to the removal of the child from the city to the country, upon which they ceased immediately, and the child improved rapidly in health and strength. Recovery appeared now so complete, that the child was brought back to a large and newly-painted house in the city; when, after a few hours, the spasmodic attacks recurred with violence. On a second removal to the country they ceased at once; a similar experiment was a second time tried, and with precisely similar results; and it is a curious fact two other children were attacked with a similar spasmodic affection in this same newly-painted house: of these, one died in a convulsion; the other, on being sent to the country, recovered. The child, whose case has just been related, had been for years free from any spasmodic affection, but remains delicate, and suffering severely from scrofulous disease."

These observations are sufficient for my present purpose, and I proceed to make a remark or two on the effects of

5. *Mental Emotion.*—Even in infants, mental irritation is a frequent cause of convulsive attacks. The infant should not be suddenly awaked out of sleep. The infant should not be "slapped" by an angry nurse. If the nursing nurse be out of temper, there is frequently a *double* source of renewed malady; her treatment of the infant is rude, and her milk unwholesome. To *change* the nurse is, therefore, occasionally a judicious and necessary measure, when the patient does not proceed prosperously.

The slightest *alarm* is still more serious in its effects. No disease, generally speaking, is so formidable as that which is induced by *fright*. All sudden noises; all rapid movements in nursing, &c., should be carefully avoided. The infant should be addressed in a soft and soothing tone of voice. In a word, every source of mental emotion should be most carefully avoided.

II. In reference to the *morbid susceptibility* of the little patient, it is, I believe, best subdued by the tincture of hyoscyamus and the infusion of the humulus lupulus. The system may be kept constantly under the gentle influence of these remedies; that of the exciting causes is then less injurious. The gentle tonic influence of sponging the general surface with tepid salt water is also highly beneficial. All inclemencies of the weather being avoided—for heat, cold, and the northeasterly winds, are alike injurious—the child should be much in the open air. It should be protected, not only by the *shade*, but by a flannel dress which should cover every part of the surface, whilst the clothing in general should be suited to the season.

III. I must now make a few remarks on the *pathology* of this affection, and especially on the connection which the condition of the *thymus* gland has been supposed to have with it.

Much has been said by various authors about the enlarged condition of this gland as the *cause* of the crowing inspiration and convulsion. They have been deceived by the morbid appearances. They have not reflected that enlargement of the thymus might be a natural *effect* of the violent convulsive efforts observed in this terrific malady. I have known the thyroid gland become and remain enlarged in like manner after the efforts of severe and protracted labour. I have known the eyes to be bloodshot from hooping-cough; the eyelids to be ecchymosed, in spots, from epilepsy, and from the efforts of vomiting and parturition.

In this manner we may understand how enlargement of the thymus may be an effect of this formidable disease. Viewed in this point of light, we can readily imagine that it would subside with the disease. In this manner we are led to consider the disease as not necessarily incurable, which it must be if it depended on organic change of structure. This case affords another example, of morbid anatomy, erroneously interpreted, leading to erroneous views of disease.

If we carry our views to the condition of the brain, and bear in mind the effect of the convulsive effort on the thymus gland, and on the face, we shall see the great importance of adopting measures which may relieve the congested encephalon. Unfortunately, depletion adds to the susceptibility of the nervous system, and therefore to the disposition to attacks. The spirit-lotion applied to the head seems to be the safest remedy, as well as the most efficacious one. In severe cases the ice-cap should be applied.

As a confirmation of these views, I may mention that it has never been my lot to see the veins on the forehead of a little patient so enlarged, as the case in question.

In conclusion, I may repeat that no case could present a more marked diathesis of the convulsive character than this little patient. One of nine children, all of whom had suffered from the crowing convulsion, three having died, and one having presented the appearance of enlarged thymus, the principle of the total removal of all irritation, gastric, intestinal, and dental, succeeded, nevertheless, in subduing the disease. The stomach and bowels having been cleared, we procured a healthy nurse, letting her milk be the only food; we kept the bowels free by the mildest measures (for I am convinced that rough ones, and especially calomel and senna, frequently induce the attack;) and we kept the gums free from irritation by the use of the gum-lancet; and under this treatment the child has done well. A cold spirit-lotion applied to the crown of the head, and change of air, and especially the sea-breezes, doubtless also contributed their aid in the cure. I have frequently had to remark the baneful influence of the northeast wind, and the beneficial influence of change of air on this disease, as in pertussis, with which it seems, indeed, to possess various points of resemblance, not to say connection.—*Lancet*, July 9, 1842.

—

27. *Two fatal cases of Laryngismus Stridulus.*—Mr. F. Ryland of Birmingham, relates in the *Prov. Med. & Surg. Journ.* July 30, 1842, two fatal cases of laryngismus stridulus, with the appearances after death.

The first case occurred in a boy, who had been habitually costive, and who when six months of age, became unhealthy in appearance; his skin soft; restless at night; occasionally had severe fits of crying; and his thumbs were constantly drawn towards the palms of his hands. Two weeks afterwards he was observed occasionally to make a croupy noise in breathing, and some days subsequently, he had two or three severe fits of laryngismus. These fits occurred occasionally during a month, and in one of them he suddenly expired.

"An examination was made of the body forty-five hours after death. The veins about the head and neck were distended by dark fluid blood. There was a considerable deposition of serum within the membranes external to the brain, and the convolutions were much separated from each other by this effusion. No milkiness of the arachnoid; the veins of the meninges were distended with blood. The brain itself was quite healthy, and the ventricles contained rather more fluid than ordinary, but not much. In the membrane at the base of the brain, Dr. Evans, who did me the favour to assist me in the examination, discovered four or five semi-transparent bodies of the size of millet seeds, which he thought were tubercles. On opening the chest the thymus appeared large, it was not measured, but its weight was nine drachms and a half. It was in contact posteriorly with the innominata vein, the trachea, and the pericardium. It was of a pinkish colour, and contained much milky fluid. Neither before death nor afterwards could we detect any enlarged glands in the neck. The nervus vagus and the recurrent appeared to be quite normal."

The second case was a brother to the preceding, and until fourteen months of age had no spasm of the glottis or indeed any disease, except a severe diarrhœa when a year old, which reduced him much. When fifteen months old, he began to experience occasional fits of laryngismus; which continued to recur at intervals for two months, when in one of them he expired.

Post-mortem Examination thirty-two hours after Death.—The thymus was normal as to size and appearance; certainly it was not large in any direction. The lungs were emphysematous over the greater part of their external surface; internally they were healthy and only slightly congested. There was no fluid in the pleuræ. The veins about the neck were distended with dark fluid blood. The larynx, trachea, and larger bronchi were of a pale red colour, from increased vascularity, the mucous membrane of the larynx was thickened as well as vascular. The rima was quite closed, this closure being the effect of muscular action, as it was readily opened by a probe, and remained open afterwards. The trachea and bronchi contained a large quantity of mucus. The glands about the arch of the aorta were enlarged and vascular; there were no glands about the subclavian artery where it is encircled by the right recurrent nerve. The recurrents were of a natural size and appearance, and were not attached to, nor pressed upon by any absorbent glands in any part of their course.

The head was next examined. The veins and sinuses of the membranes of the brain were distended with blood to an extent such as I never saw surpassed, and within the substance of the brain the same distension of the vessels existed. There was no fluid either beneath the membranes or within the ventricles, except at the base of the brain, where the quantity of fluid was perhaps more than natural; no milkiness of the arachnoid. The brain, cerebellum, and medulla oblongata were perfectly normal. No diseased appearance, in fact, existed within the cranium except the extreme turgidity of the vessels, which was undoubtedly owing to the last struggle.

Remarks.—The proximate cause of death in both cases was the same—viz., suffocation from spasmodic closure of the rima glottidis and tetanic rigidity of the muscles concerned in carrying on the respiratory process. The exciting cause of the spasmodic action of the muscles of the larynx appears to have been in Case I., dentition complicated with head affection; the determination of the diseased action to certain muscles being attributable, I presume, to constitutional predisposition. The source of the disease was in the nervous centres; the exciting causes of the paroxysms, where any could be made out, were, besides dental irritation, thwarting, vexation, or mental disturbance. The *excito-motory* theory which has been so strongly insisted upon by Dr. Marshall Hall as explanatory of the phenomena of this disease, offers a reason for the peculiar excitability of the muscles of the larynx in the irritation of the dental branches of the fifth pair of nerves; it thus shows the *course* of the diseased action, but leaves us still in the dark as to the cause why a peculiar spasmodic action of the laryngeal muscles should take place in certain cases of dental irritation, whilst in other cases general convulsions, carpo-pedal contractions, or other well-known effects should arise from apparently similar circumstances.

The exciting cause of the spasmodic action of the muscles of the glottis in Case II. appears to have been inflammation of the larynx and bronchial tubes, together with dental irritation. The usual signs of head affection were absent both before and after death; the thymus were perfectly normal in appearance; the recurrent nerve was unimpeded in its action; the stomach and bowels were free from disease, and performed their functions properly. No other commonly accepted cause of the laryngeal spasm remains but bronchitis and dental irritation combined with hereditary predisposition. Lancing the gums was serviceable only in the early stages of the complaint, therefore I am disposed to exclude dental irritation from the list of causes in the latter periods of the patient's life, and to ascribe the continuance of the disease to the catarrhal affection only. I need scarcely add, that Dr. M. Hall's theory, whilst it explains in the latter case as in the former the course of the disease, fails in pointing out its cause.

---

28. *Statistics of Phthisis.*—Dr. Hughes has collected a series of cases of phthisis observed by himself, from which he obtains the following statistics:—The number of cases is 250, of which 175 were males and 75 females; of these there were 203, of which 138 were men and 65 women, whose chests were only explored during life. The remaining 48, of which 37 were men and 11 women, were examined after death. Of these, the left side was chiefly diseased in 116 cases, or 46 per cent.; the right in 89, or 36 per cent.; the more diseased side was doubtful in 45 cases, or 18 per cent. Of the 116 cases on the left side, there were 76 males, 43 per cent., 40 females, 53 per cent.; of the 89 cases on the right side, there were 66 males, 38 per cent., 23 females, 30 per cent.; of the 45 cases in which the more diseased side was doubtful there were 33 males, 19 per cent., 12 females, 16 per cent. Of the 48 cases examined after death, of which 11 only were females, and 37 males, the tubercles were confined to the left lung in 3 males and 1 female, and to the right lung in 1 male only. From this it appears that there is a somewhat greater liability to tubercular action on the left side of the chest than on the right.

Of these 250 cases, the upper lobe of one or both lungs was solely or principally diseased in 237, or 95 per cent. Of the 12 remaining cases, of which 11 occurred in males and only 2 in females, there were 9, or 3 and 3-5ths per cent. of the whole number, in which both lungs were universally and uniformly diseased; of these, 8 were males and 1 was a female; of the remaining 4 cases, the upper lobe in 3 was at least equally affected with other parts, and in the fourth the tubercles were deposited in the base, and were not found in the upper part of the lung. This last case was that of a poor boy, who had large opaque tubercles in the peritoneum, diseased mesenteric glands, fæcal abscess from ulceration of the intestine, chronic bronchitis, a few tubercles in the right lung, suppurating bronchial glands, and at the base of the left lung largely dilated bronchial tubes filled with purulent mucus, and chronic pneumonia. There were also in the same part a few transparent tubercles, and in one portion, about as large as a walnut and not consolidated by pneumonia, there were several of these bodies, which were larger and perfectly opaque. Tubercles are deposited first in the upper part of the lung in the proportion of 94 per cent.

After puberty, phthisis is most generally fatal between the ages of 20 and 30; next, between 20 and 40; then between 40 and 50; below 20 and above 50 the mortality from this disease is very much diminished. Fewer females than males affected with this disease attain the age of 40; in other words, women die of consumption at rather an earlier age than men. Dr. Hughes states further, that tubercles may be simultaneously deposited throughout both lungs, and may then present no other physical signs than those of bronchitis, but this form, which is comparatively very rare, is not necessarily acute, and confined to young persons. —*Prov. Med. and Surg. Journ.* June 4, 1842, from *Guy's Hospital Reports.*

29. *Statistical Researches into the Etiology of Pulmonary Phthisis.*—M. Briquet has published in the *Revue Medicale*, Feb. 1842, a paper founded on an investigation into various particulars connected with the history of 109 phthisical patients in whom the disease was far advanced, and likewise on data furnished by all the deaths from phthisis in the hospital between January 1st, 1838, and January 1st, 1841, being 182 in number.

The conclusions at which M. Briquet arrives, are:

1. That during the past three years one tenth more of men than of women have been received into the Hôpital Cochin affected with phthisis: a result directly contrary to those obtained by MM. Lombard and Louis.

2. In at least a third of the patients phthisis was distinctly hereditary, and predisposition to the disease seemed more frequently to come from the father than the mother.

3. No immunity from the disease is afforded by the circumstance of being born of parents who are natives of the country, or by being brought up in the country.

4. Tall stature, a slender frame, an ill formed chest, and convexity from the root to the point of the nails are the only external characteristics of phthisical diathesis.

5. It occurred very seldom that the circumference of the upper part of the chest was less than that of the lower part: a fact directly contrary to the assertion of M. Hertz.

6. Those callings in the pursuit of which there is discomfort, want of exercise and of pure air present a greater number of phthisical persons than is to be found among those who pursue different occupations.

7. A third of these patients were more subject to catarrh than other persons, and were more sensible of cold.

8. In three-fifths of the patients phthisis developed itself between twenty and thirty years of age, but more than two-thirds of those whose parents had suffered from consumption became phthisical before their thirtieth year; while, of those whose parents had not been healthy, half did not show symptoms of phthisis till after thirty.

9. In four-fifths of the patients there existed predisposition to phthisis, and in three-fifths this predisposition was acquired.

10. Cold is the most powerful cause of the acquired predisposition: next to which are misery, privation, and distress of mind.

11. Phthisis is most frequent in cold seasons, and when there are many variations in the atmosphere.

12. Four-tenths of the patients had not been exposed to the influence of any occasional cause of phthisis, but in most there existed a strong predisposition to the disease.

Five tenths had been exposed to and suffered greatly from some exciting cause, and this cause was in almost every instance cold and damp.—*Brit. and For. Med. Rev.* July, 1842.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

30. *Ecchymosis from injury simulating laceration of an artery of the part.*—Dr. Houston communicated to the Surgical Society of Ireland, (May 14,) two interesting cases of accident, in which simple ecchymosis assumed so strikingly the